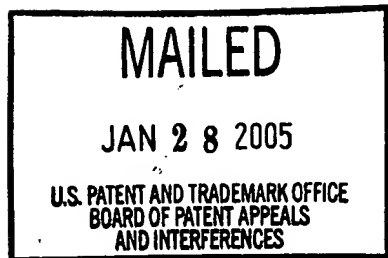


The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES



Ex parte PETER T. DIETZ

Appeal No. 2005-0244
Application No. 09/591,584

ON BRIEF

Before WALTZ, DELMENDO, and PAWLIKOWSKI, Administrative Patent Judges.

WALTZ, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the primary examiner's final rejection of claims 1-11, 13-15, 17-22, 31-33, 35, 38 and 39. The remaining claims pending in this application are claims 12, 16, 23-30, 34, 36, 37 and 40. Claims 12, 16, 23, 30, 36 and 37 are allowed, as are claims 24-27, 34 and 40, and claims 28 and 29 are objected to as allowable but depending upon a rejected base claim (final Office action dated Oct. 27, 2003, pages 4-5; Brief, pages 1-2 and 4; and the Advisory Action dated Feb. 17, 2004). We have jurisdiction pursuant to 35 U.S.C. § 134.

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According to appellant, the invention is directed to a laminate attached to window glass to provide a glazing element with reduced spall and lacerative consequences upon impact fracture of the window glass (Brief, page 2). A further understanding of the invention may be gleaned from illustrative independent claim 1 as reproduced below:

1. A laminate attached to window glass to provide a glazing element which has reduced spall and lacerative consequences on impact fracture of the window glass; said laminate comprising:

(a) a first lamina comprised of visible light transmissive flexible nonadhesive polymeric material having a first major surface and an opposite second major surface;

(b) a scratch-resistant layer over said first major surface to provide an exposed surface to the laminate;

(c) at least one additional lamina comprised of visible light transmissive flexible nonadhesive polymeric material;

(d) a sufficient number of layers in situ visible light transmissive pressure sensitive adhesive layers to bond said laminae together with the scratch-resistant layer exposed; and

(e) a layer of in situ visible light transmissive ambient temperature attachable pressure sensitive adhesive to bond said laminate to window glass, wherein the total thickness of the laminate exceeds about 5 mils and the laminate exhibits a light transmittance.

Appellant states that the claims do not stand or fall together "as a whole," listing seven groups of claims (Brief, page 4). To the extent appellants provide specific, substantive arguments for the patentability of any individual claims,

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we will consider these claims separately. See 37 CFR
§ 1.192(c)(7)(2003); *In re McDaniel*, 293 F.3d 1379, 1383,
63 USPQ2d 1462, 1465 (Fed. Cir. 2002).

The examiner relies upon the following references as
evidence of obviousness:

Murphy	4,157,417	Jun. 05, 1979
Hutchison	5,118,540	Jun. 02, 1992
Bilkadi et al. (Bilkadi)	5,677,050	Oct. 14, 1997
Yang et al. (Yang)	6,013,722	Jan. 11, 2000
Tanaka et al. (Tanaka)	6,033,785	Mar. 07, 2000

The following rejections are before this merits panel in
this appeal:

(1) claims 1-5, 7-9, 11, 13, 17-21, 31-33, 38 and 39 stand
rejected under 35 U.S.C. § 103(a) as unpatentable over Hutchison
in view of Murphy (Answer, page 3);

(2) claim 10 stands rejected under section 103(a) over the
references applied in rejection (1) further in view of Tanaka
(Answer, page 5);

(3) claim 6 stands rejected under section 103(a) over the
references applied in rejection (1) further in view of Bilkadi
(Answer, page 5); and

(4) claims 14, 15, 22 and 35 stand rejected under section
103(a) over the references applied in rejection (1) further in
view of Yang (Answer, page 6).

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Based on the record as a whole, we *affirm* all of the rejections on appeal essentially for the reasons stated in the Answer and those reasons set forth below.

OPINION

A. Rejection (1)

The examiner finds that Hutchison discloses a reflective film mounted on a substrate where the film is constructed of a protective outer fluorocarbon film, a first layer of pressure sensitive adhesive (PSA), a silver layer, a biaxially oriented polyethylene terephthalate (PET) layer, a second layer of a PSA, a biaxially oriented PET layer, and a third layer of PSA, mounted on a support structure (Answer, page 3). The examiner further finds that Hutchison teaches that the reflective film is suitable for solar energy applications but does not disclose that the reflective film is attached to window glass (Answer, page 4). Therefore the examiner applies Murphy for the teaching of a similar reflective film attached to window glass to reduce the heat and glare of solar radiation (*id.*). From these findings, the examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of appellant's invention to employ the reflective film disclosed by Hutchison with the window

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glass as taught by Murphy for the advantages of reduced heat and glare from solar radiation (*id.*).

Appellant argues that nowhere does Hutchison disclose, teach or suggest using his film in combination with window glass (Brief, page 5; Reply Brief, page 2). This argument is not persuasive. We note that Hutchison teaches the application of his film to "a flat, curved, and/or angular surface **214** of a support structure **210**" (sentence bridging cols. 6-7), used in solar energy "applications," and this disclosure of "support structure" may be considered as generic to window glass (abstract; col. 1, ll. 18-19; Figure 7; and col. 7, ll. 41-46). Furthermore, we note that Murphy has been applied by the examiner to show the obviousness of combining the Hutchison film with window glass.

Appellant argues that there is no motivation or suggestion to combine Hutchison and Murphy since the films of these references have "diametrically opposed functions," namely the film of Hutchison functions to reflect visible light in addition to ultraviolet and infra-red while the Murphy film functions to transmit visible light while reducing ultraviolet light, infrared light and glare (Brief, page 6; Reply Brief, pages 4-5).

This argument is also not persuasive. As noted by the examiner (Answer, page 7), the solar control film of Hutchison is very similar in construction and materials to the solar control film set forth by Murphy.¹ Furthermore, we determine that the functions of these similar solar control films are not "diametrically opposed" but are very much alike. Hutchison teaches that "[t]o be efficient a reflective film must be highly specularly reflective to visible, ultraviolet, and/or near infra-red light between about 300-2,500 nanometers" (col. 1, ll. 19-22). Although Hutchison teaches that some uv light will be transmitted by the thin layer of silver (col. 2, ll. 14-20), this reference also teaches that "[s]ilver reflects visible light better than aluminum" (col. 1, ll. 52-53). Therefore the teaching in Murphy that visible light is somewhat transmitted by the aluminum layer (col. 5, ll. 25-27) is not a "diametrically opposed function" but would have been suggested to one of ordinary skill in this art by the teachings of Hutchison. We note that Murphy teaches that the transmission of visible light, even with a thin aluminum layer, may be reduced by up to 90%

¹We note that Hutchison teaches the advantages of a silver metal layer over that of aluminum (col. 1, ll. 52-53; col. 2, ll. 14-20) while Murphy employs an aluminum layer but teaches that silver may be used (col. 1, ll. 36-54).

(col. 1, ll. 44-49; note that other metals such as silver are taught by Murphy at col. 1, ll. 49-54).

Appellant argues that Hutchison does not disclose, teach or suggest that one of his laminates is capable of passing the tests as required in claims 7, 13, and 17-21 (Brief, page 7; Reply Brief, page 7). This argument is not persuasive. The examiner has established a reasonable belief that the laminate of Hutchison will have the same or substantially the same properties as the claimed laminate, due to the similar materials and construction of layers (Answer, pages 8-9). Accordingly, the burden of proof has been shifted to appellant to prove that the laminates of the prior art do not have the properties set forth in the claims on appeal. See *In re Spada*, 911 F.2d 705, 708, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990); see also *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977).

Appellant argues that Hutchison does not disclose, teach or suggest that his acrylic PSA possesses a shear storage modulus falling within the limitations of claims 8 and 11 (Brief, pages 7-8; Reply Brief, pages 7-8). This argument is not well taken since Hutchison discloses that the acrylic PSA is, *inter alia*, "chosen based on its bonding properties" (col. 8, ll. 2-5). Accordingly, the determination of the optimum properties of the

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acrylic pressure-sensitive adhesive would have been well within the ordinary skill of one in this art. See *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

For the foregoing reasons and those set forth in the Answer, we determine that the examiner has established a *prima facie* case of obviousness in view of the reference evidence. Based on the totality of the record, including due consideration of appellant's arguments, we determine that the preponderance of evidence weighs most heavily in favor of obviousness within the meaning of section 103(a). Therefore we affirm the rejection of claims 1-5, 7-9, 11, 13, 17-21, 31-33, 38 and 39 under section 103(a) over Hutchison in view of Murphy.

B. Rejections (2), (3) and (4)

In each of the above rejections, the examiner relies on Hutchison and Murphy, as discussed above, with the additional citation of Bilkadi against claim 6, Tanaka against claim 10, and Yang against claims 14, 15, 22 and 25 (Answer, pages 5-7). We adopt the examiner's findings from the Answer and as discussed above.

Appellant argues that Bilkadi does not suggest forming the claimed laminate in combination with window glass, nor is there any motivation or suggestion in this reference to combine the

teachings of Hutchison and Murphy (Brief, page 8). These arguments are not well taken since Bilkadi is not relied upon to teach the claimed laminate but only as evidence of other well known scratch-resistant coatings that work well with acrylic adhesives (Answer, page 6). The motivation to combine Hutchison and Murphy has previously been stated by the examiner (Answer, page 4).

Appellant argues that Tanaka "does not correct for the deficiencies of the combination of Hutchison and Murphy" (Brief, page 8). We rely upon our comments concerning Hutchison and Murphy discussed above and in the Answer.

Appellant argues that Yang does not provide any motivation or suggestion for combining the teachings of Hutchison and Murphy (Brief, page 9). Appellant further argues that Yang does not disclose a laminate of at least two polymeric material laminae bonded together where the laminate and window glass have a percent haze less than or equal to about 2.0% (*id.*). These arguments are not well taken. As discussed above, the examiner has established a proper motivation or suggestion to combine the teachings of Hutchison and Murphy (Answer, page 4). As correctly found by the examiner (Answer, page 6), Yang teaches that post-additive crosslinking agents added to an acrylate pressure-

sensitive adhesive produce adhesives with low haze, a desired feature in optical articles (Yang, abstract; col. 2, ll. 58-67; and col. 3, l. 66-col. 4, l. 11). Therefore the examiner has established that it would have been reasonable to one of ordinary skill in the art to add the crosslinkers taught by Yang for acrylate pressure-sensitive adhesives to the similar acrylic PSA of Hutchison to lower haze in the laminate. The optimum amount of additive would have been well within the ordinary skill in the art. *See In re Woodruff, supra.*

For the foregoing reasons and those stated in the Answer, we determine that the examiner has established a *prima facie* case of obviousness in view of the reference evidence in rejections (2), (3) and (4) as set forth above. Based on the totality of the record, including due consideration of appellant's arguments, we determine that the preponderance of the evidence weighs most heavily in favor of obviousness within the meaning of section 103(a). Accordingly, we affirm rejections (2), (3) and (4) as set forth above.

C. *Summary*

The rejection of claims 1-5, 7-9, 11, 13, 17-21, 31-33, 38 and 39 under section 103(a) over Hutchison in view of Murphy is affirmed. The rejection of claim 10 under section 103(a) over

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Hutchison in view of Murphy and Tanaka is affirmed. The rejection of claim 6 under section 103(a) over Hutchison in view of Murphy and Bilkadi is affirmed. The rejection of claims 14, 15, 22 and 35 under section 103(a) over Hutchison in view of Murphy and Yang is affirmed.

The decision of the examiner is affirmed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv) (effective Sep. 13, 2004; 69 Fed. Reg. 49960 (Aug. 12, 2004); 1286 Off. Gaz. Pat. Office 21 (Sep. 7, 2004)).

AFFIRMED

Thomas A. Waltz
THOMAS A. WALTZ

THOMAS A. WALTZ
Administrative Patent Judge

Ronald H. Schneider

ROMULO H. DELMENDO
Administrative Patent Judge

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Beverly A Pawlton

BEVERLY A. PAWLIKOWSKI
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